

REMARKS

This paper is submitted in response to the Office Action dated August 7, 2007 (the "Office Action").

Claims 1-5, 7-18, 24-27, 29, 31, 33-37, 39, 41-43, and 45-53 were previously pending in the application. Claims 1, 8, 15, 24, and 33 have been amended in this paper. Claim 54 has been added in this paper. Accordingly, claims 1-5, 7-18, 24-27, 29, 31, 33-37, 39, 41-43, and 45-54 are now pending.

Claims 1-5, 7-18, 24-27, 29, 31, 33-37, 39, 41-43, and 45-53 stand rejected.

Claims 1-5, 7-18, 24-27, 29, 31, 33-37, 39, 41-43, and 45-53 stand rejected under 35 U.S.C. § 101 as being directed to non-statutory subject matter. Claims 1-5, 7-18, 24-27, 31, 33-37, 39, 42, 43, 46, 47, 49, 51, and 53 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 6,035,305 issued to Strevey et al. ("Strevey") in view of U.S. Patent No. 5,980,096 issued to Thalhammer-Reyero et al. ("Thalhammer-Reyero"). Claims 40, 41, 44, 45, 48, 50, and 52 stand rejected under § 103(a) as being unpatentable over Strevey in view of Thalhammer-Reyero and further in view of U.S. Patent No. 5,884,217 issued to Skeirik et al. ("Skeirik").

The amendments add no new matter and are supported by the specification as originally filed. Support for the amendments may be found, for example, in ¶¶ 5, 61, 157, and 159 of the Specification as originally filed. While not conceding that the cited reference qualifies as prior art, but instead to expedite prosecution, Applicant has chosen respectfully to address the rejection in the Office Action as follows. Applicant reserves the right, for example in a continuing application, to establish that one or more of the cited references do not qualify as

prior art as to an invention embodiment previously, currently, or subsequently claimed.

Applicant respectfully submits that the pending claims are patentable and respectfully requests reconsideration of the pending rejections in view of the amendments and remarks presented herein.

Rejections under 35 U.S.C. § 101

Claims 1-5, 7-18, 24-27, 29, 31, 33-37, 39, 41-43, and 45-53 stand rejected under § 101 as being directed to non-statutory subject matter. In particular, the Office Action asserts that the claims fail to produce a “useful, concrete, and tangible result.”

Although the criteria regarding a “useful, tangible, and concrete result” do not explicitly appear in § 101, they are discussed in § 2106 et. seq. of the *Manual of Patent Examining Procedure* (Ed. 8, Rev. 5, Aug. 2006) (the “MPEP”) as being relevant in situations where claims touch on a “judicial exception” to patentability under § 101.

Applicant respectfully submits that a correct application of MPEP § 2106 to Applicant’s claims leads to a conclusion that Applicant’s claims are patentable under § 101. For example, in the case of Applicant’s independent claim 1, the claim is directed to a method, and thus falls within one of the four enumerated categories of patentable subject matter recited in § 101 (i.e., process, machine, manufacture, or composition of matter).

After discussing the four enumerated categories of patentable subject matter, the inquiry in MPEP § 2106 turns to judicial exceptions to patentability. The judicial exceptions include claims directed to material such as an abstract idea, natural phenomena, or laws of nature. MPEP § 2106(IV)(C)(1) requires that these situations must be dealt with in a specific manner. This section makes clear that if a claim is directed to “a practical application,” this aspect of the

claim may cure concerns that arise from the claim being directed to an abstract idea (or other judicial exception to patentability).

To start, Applicant notes that the Office Action makes no assertion that the method of claim 1 falls within a judicial exception to § 101. Applicant respectfully submits that the method of claim 1 does not fall within a judicial exception to § 101, because claim 1 is not directed to an abstract idea, or to a natural phenomenon, or to a law of nature, or to any other judicial exception from patentability. At this stage the inquiry under § 101 and MPEP § 2106 is thus concluded, and Applicant's claim 1 qualifies for patent protection under § 101.

MPEP § 2106 then turns to a follow-up inquiry that is needed for claims that do fall within a judicial exception, such as claims that cover laws of nature or abstract ideas. MPEP § 2106(IV)(C)(1) requires that:

USPTO personnel must ascertain the scope of the claim to determine whether it covers either a 35 U.S.C. 101 judicial exception or a practical application of a 35 U.S.C. 101 judicial exception. The conclusion that a particular claim includes a 35 U.S.C. 101 judicial exception does not end the inquiry because the practical application of a judicial exception may qualify for patent protection.

The subsequent discussion in MPEP § 2106 addresses situations where a claim includes such judicially excluded subject matter, and sets forth tests to determine if the claims are nonetheless eligible for patent protection. To be eligible, the claims “must be for a practical application of the abstract idea, law of nature, or natural phenomenon.” (MPEP § 2106(IV)(C)(2).) One test for finding whether claims are “for a practical application” is to determine “whether the final result achieved by the claimed invention is ‘useful, tangible, and concrete.’ ” (MPEP § 2106(IV)(C)(2)((2)).)

In the case of Applicant's claim 1, the follow-up query from MPEP § 2106(IV)(C)(2) is not needed. Since Applicant's claim 1, is not directed to a § 101 judicial exception, there is no

need to check that the exception is remedied by achieving a useful, tangible, and concrete result.

Nonetheless, Applicant notes that claim 1 does indeed present a practical application by virtue of achieving a useful, tangible, and concrete result.

The result of the claimed method is a determination whether to make a requested association. This result is “useful” because it is “specific, . . . substantial and . . . credible,” as required by MPEP § 2106(IV)(C)(2)((2))(a). The result is a specific one by virtue of being based on the customizable class rule set forth in the claim. It is also a substantial result because it is more than an insignificant transformation of input data. Rather, the claim language clearly specifies a response to the requested association. And finally, it is a credible result by virtue of being readily achievable by a person having ordinary skill in the art in view of Applicant’s disclosure.

This result is also “tangible” because it produces “a real-world result,” as required by MPEP § 2106(IV)(C)(2)((2))(b). The output is not merely a theoretical construct; it is a relevant tool based on a request, such as a user request, for example, and involves several well-defined steps or acts, as set forth in the claim language and as further described in Applicant’s disclosure.

Finally, this result is also “concrete.” MPEP § 2106(IV)(C)(2)((2))(b) indicates that in order to be concrete, a “process must have a result that can be substantially repeatable or the process must substantially produce the same result again.” When properly implemented by a person having ordinary skill in the art in view of Applicant’s disclosure, and when presented with repeated instances of the same input conditions, the method of claim 1 produces a substantially repeatable result, since it is based on deterministic operations that respond in a reproducible way to input conditions. The method of claim 1 is thus “concrete” as understood by MPEP § 2106.

Thus, even if somehow Applicant's claim 1 were to be seen as falling within a judicial exception to patentability (a proposition with which Applicant does not agree), the claim would nonetheless be patentable under MPEP § 2106 as achieving a useful, tangible, and concrete result. Accordingly, Applicant respectfully submits that independent claim 1 and all claims dependent therefrom are allowable under § 101. At least for similar reasons, Applicant respectfully submits that independent claims 8, 15, 24, and 33 and all claims dependent therefrom are also allowable under § 101.

Rejections under 35 U.S.C. § 103(a)

Claims 1-5, 7-18, 24-27, 31, 33-37, 39, 42, 43, 46, 47, 49, 51, and 53 stand rejected under § 103(a) as being unpatentable over Strevey in view of Thalhammer-Reyero. Claims 40, 41, 44, 45, 48, 50, and 52 stand rejected under § 103(a) as being unpatentable over Strevey in view of Thalhammer-Reyero and further in view of Skeirik. Applicant respectfully submits that various limitations of the claims are not disclosed in the cited portions of the references.

As amended, independent claim 1 recites:

1. A computer implemented method of customizing a product comprising:
providing a set of one or more customizable product classes;
receiving a customizable class rule in a natural language template;
receiving a request to designate a customizable product class from the set of customizable product classes as a customizable product instance;
receiving a request to associate a first component product from a set of component products with the customizable product instance; and
automatically determining whether to associate the first component product with the customizable product instance based on the customizable class rule.

With regard to the limitation of “determining whether to associate the first component product with the customizable product instance based on the customizable class rule,” the Office Action appears to argue on pp. 4 and 5 that this limitation is met by various elements in Strevey. In particular, the Office Action cites the use of constraints (Strevey at Abstract, lines 15-19), a “graphical option object” (Strevey at 2:52-59), a “graphical contingent relationship object” (Strevey at 2:65—3:3), “graphical constraint object” (Strevey at 3:8-10), a determination of required modules based on selected options (Strevey at 5:3-6), “option-to-option relationship information” (Strevey at 5:61-67), and the use of modules “when one or more associated options are selected” (Strevey at 9:1-10).

Strevey describes a computer based method for creating a “Knowledge Map.” The Knowledge Map “graphically displays the information necessary to configure a product.” (Strevey at 2:40-42.) The Knowledge Map is not a computer tool used for interactive communication with a user or customer. Rather, it is a graphical display that is created by a user (*see, e.g., id. at* 1:8-10, 2:13, and 2:40-42) and can be used by a customer for reference in selecting available options when determining a desired configuration of a complex product, such as a commercial aircraft (*see, e.g., id. at* 3:35-39, FIG. 7A). The Knowledge Map may be created by a user with graphical layout software with palettes, such as Visio® 4.0. (*Id. at* 6:62-65.)

The Strevey Knowledge Map is not described in the cited passages as being an interactive tool. Rather, it is assembled by a user for reference by a customer. An example of Strevey’s Knowledge Map is shown in FIG. 7A. It is a graphical display for showing two options for a customer, a “five minute takeoff” option 704 and a “ten minute takeoff” option 706.

The cited portions of Strevey describe how a user can assemble such a graphical “Knowledge Map” from “product information.” (Strevey at Abstract, lines 15-19, 2:52-59,

2:65—3:3, 3:8-10, 5:61-67, and 9:1-10; see also 2:36-42, 3:23-34, 4:36-44.) The following passage of Strevey describes the input “product information” (also called “knowledge” in Strevey) and the output “Knowledge Map”:

Product information includes such data as product configuration options, modules, and the relationships between options or between options and modules. In the employment of the invention, a user gathers product information, or “knowledge,” and creates a “Knowledge Map,” which is a graphical representation of the knowledge. The Knowledge Map provides a user with a well-organized description of available product options and associated product module requirements. The user then retrieves the structured product information and creates a computer program that validates a customer's selection of product options and configures a product in accordance with the knowledge residing in the Knowledge Map. The validation and configuration program can be either a rules-based program or an object-based program, both of which are discussed in further detail below.

(Strevey at 4:36-51.)

As sources for the input “knowledge,” Strevey explains that:

At step 24, knowledge pertaining to product options and product configurations is retrieved from one or more sources. The sources may include knowledgeable experts, computer data, or printed information. At step 26, the collective product information is used to create a Knowledge Map on a computer.

(Strevey at 4:55-60.)

The cited portions of the Office Action also describe a “rules-based program” (e.g., Strevey at 5:3-6) that “configures a product by determining the modules required to be included in the product, based on the set of product options selected.” The selection of options is performed by a customer, however, who refers to the graphical Knowledge Map. (*Id.* at 3:35-40 (teaching that the Knowledge Map provides a “description” of available options), 6:62-65 (teaching that the Knowledge Map can be drawn in Visio 4.0).

After a customer has provide a requested product order, a user “then retrieves the structured product information and creates a computer program that validates a customer's selection of product options.” (Strevey at 3:42-49.) Strevey thus teaches that the Knowledge Map does not validate customers’ selections; rather this validation is performed by a computer program that is created after a customer has made selections with reference to the information shown in the graphical Knowledge Map. Similarly, the configuring of a product in Strevey is also performed after a customer has made the selections with reference to the graphical Knowledge Map. (*Id.*)

Applicant understands the Office Action as proposing that various “[o]ption-to-option relationship information” (Strevey at 5:61-67) and similar features of Strevey correspond to Applicant’s customizable class rule. Examples of such a relationship are illustrated by the disjunctive “OR” relationship 714 in Strevey’s FIG. 7A (Strevey at 11:31-49). These relationships for options in Strevey are features from the input knowledge or product information. Strevey “provides a pallet of graphical objects that represent product information such as configuration options, modules, and the relationships between options or between options and modules.” (Strevey at 3:26-30.) Thus, the Office Action appears to equate Applicant’s “customizable class rule” with Strevey’s “option-to-option relationship information” and other features from the input knowledge or product information in Strevey.

Even if the Office Action’s characterization of Strevey is correct (and Applicant does not concede this point), Applicant respectfully submits that various limitations of pending claim 1 are not disclosed in the cited portions of the references.

For example, the limitation in Applicant’s claim 1 of “determining whether to associate the first component product with the customizable product instance based on the customizable

class rule” is simply not disclosed in the cited passages. The cited passages describe option-to-option relationship information, which the Office Action equates with Applicant’s customizable class rule, as discussed above. However, the cited passages do not describe any “determining” that is based on this option-to-option relationship information. At best, this information is provided to a customer for reference along with the rest of Strevey’s Knowledge map. The cited passages of Strevey does not present any mechanism by which an actual decision, selection, other determination is made based on this option-to-option relationship information. The cited passages thus do not describe an operation of “determining whether to associate the first component product with the customizable product instance based on the customizable class rule.”

The cited passages of Thalhammer-Reyero and Skeirik do not remedy this shortcoming of Strevey. At least for this reason, Applicant respectfully submits that amended independent claim 1, and all claims dependent therefrom, are allowable under and § 103(a). At least for similar reasons, Applicant respectfully submits that amended independent claims 8, 15, 24, and 33, and all claims dependent therefrom, are also allowable under § 103(a). Accordingly, Applicant respectfully requests that the rejections be withdrawn.

CONCLUSION

Applicant submits that all claims are now in condition for allowance, and a notice to that effect is earnestly solicited. Nonetheless, should any issues remain that might be subject to resolution through a telephonic interview, the Examiner is requested to telephone the undersigned.

If any extensions of time under 37 C.F.R. § 1.136 are required in order for this submission to be considered timely, Applicant hereby petitions for such extensions. Applicant

also hereby authorizes that any fees due for such extensions or any other fee associated with this submission, as specified in 37 C.F.R. § 1.16 or § 1.17, be charged to deposit account 502306.

I hereby certify that this correspondence is being deposited with the United States Postal Service as First Class Mail in an envelope addressed to: Mail Stop Amendment, Commissioner for Patents, P. O. Box 1450, Alexandria, Virginia, 22313-1450, on January 7, 2008.



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2008 Jan 7

Date of Signature

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